

**Growth inhibition of human pro-myelocytic leukemia (HL-60) cells by lipid extracts of marine alga *Sargassum marginatum* (Fucales, Phaeophyta) harvested off Goa (west coast of India) with special reference to fatty acid composition**

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**INDIAN JOURNAL OF MARINE SCIENCES**

33 (4): 355-360 DEC 2004

**Document type:** Article      **Language:** English

**Abstract:**

The present investigation deals with the fatty acid composition of total lipids and different lipid classes of brown seaweed *Sargassum marginatum* harvested off Goa. An effort was made to screen the growth inhibitory/cytotoxic activity of lipid extracts on the human pro-melocytic leukemia (HL-60) cells. Phospholipids (PL) were found to be the most effective compared to the other lipid classes in terms of cytotoxic activity. PL exhibited cytotoxic activity at concentrations as low as 20 mug/ml. Phospholipids were found to be higher in poly unsaturated fatty acids (PUFA) among all the lipid classes analysed. This study indicates the possibility of seaweeds as potential sources of anticancer substances. Further works are needed to identify the active compound responsible for this anti-cancerous activity. The role of non-methylene interrupted (NMI) fatty acid specific to *Sargassum* spp, as anti-cancerous substance, also needs to be elucidated.